Listing of Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Previously Presented) A gaming machine comprising:

means for receiving a wager;

a system memory containing physical object data and simulation rule data, wherein said simulation rule data includes interaction guidelines associated with a winning condition;

a display;

a central processor randomly selecting a game outcome from a plurality of game outcomes in response to receiving the wager, the plurality of game outcomes including said winning condition, the central processor also processing said physical object data and said simulation rule data to produce a realistic depiction of gaming activity on said display in response to the selection of said winning condition; and

means for awarding a payoff based on said winning condition of said gaming activity.

2. (Original) The gaming machine of claim 1 further comprising a 3D processor interacting with said central processor to facilitate the production of said real-world gaming activity on said display.

3. (Original) The gaming machine of claim 1 where said physical object data includes data relating to the mass and dimensions of at least one simulated object.

4. (Original) The gaming machine of claim 1 wherein said simulation rule data includes data relating to a simulated gaming world and data relating to rules for interaction between said physical object data and said simulated gaming world data.

5. (Original) The gaming machine of claim 4 wherein said gaming machine is adapted to display three-dimensional simulations of gaming activities.

6. (Original) The gaming machine of claim 1 wherein said processor is adapted to firstly use said physical object data and said simulation rule data to mathematically model said gaming activity and to secondly enable the display of said realistic depiction on said display.

7. (Original) The gaming machine of claim 1 wherein said gaming activity is a sport and said physical object data relates to one or more participants in said sport.

8. (Previously Presented) A method of operating a gaming machine comprising:

accepting a wager;

accessing physical object data;

accessing simulation rule data;

randomly selecting a game outcome from a plurality of game outcomes, the plurality of game outcomes including a winning condition;

mathematically modeling game actions of one or more physical objects within a simulation world using said physical object data and said simulation rule data, wherein said simulation rule data includes interaction guidelines associated with said winning condition;

displaying a visual depiction of said game actions;

determining if said game outcome is said winning condition; and

awarding a payoff if said game outcome is said winning condition.

9. (Original) The method of claim 8 further comprising accessing motion capture data and using said motion capture data while displaying said visual depiction.

10. (Original) The method of claim 8 wherein mathematically modeling game actions includes mathematically modeling sports actions.

11. (Original) The method of claim 8 wherein mathematically modeling game actions comprises applying said simulation rule data to said physical object data to result in a realistic mathematical model of real-world physical object interactions.

12. (Original) The method of claim 8 further comprising defining said physical object data by mathematically representing physical qualities of real-world objects.

13. (Previously Presented) The method of claim 12 further comprising defining said simulation rule data by mathematically representing real-world physical principles.

14. (Original) The method of claim 8 further comprising computationally altering said game actions to cause predefined probabilities of certain game actions.

15. (Previously Presented) A method of operating a gaming machine comprising:

accepting a wager;

simultaneously simulating and displaying in real time an interaction of simulated physical objects using a representation of three-dimensional forms, wherein said interaction of said simulated physical objects include a plurality of outcomes having a winning condition;

randomly determining an outcome of said interaction; and

awarding a payoff if said outcome is the winning condition.

16. (Original) The method of claim 15 wherein simultaneously simulating and displaying an interaction of physical objects comprises using simulation rule data to determine an interaction of simulated physical objects modeled using physical object data.

17. (Previously Presented) The method of claim 15 further comprising comparing said outcome of said interaction to a set of predefined outcomes to determine whether said outcome is the winning condition.

18. (Original) The method of claim 15 wherein simultaneously simulating and displaying said interaction comprises implementing a physics engine with a combination of a central processing unit and a 3D processor.

19. (Original) The method of claim 18 wherein simultaneously simulating and displaying said interaction comprises simulating and displaying a casino-style game selected from the group consisting of roulette, craps, slots, cards, and wheel of fortune.

20. (Original) The method of claim 18 wherein simultaneously simulating and displaying said interaction comprises simulating and displaying a sports game.

21. (Original) The method of claim 20 wherein said sports game is selected from the group consisting of baseball, basketball, soccer, hockey, football, bowling, and racing.

22. (Previously Presented) A method of operating a gaming machine comprising:

accepting a wager;

implementing a physics engine using physical object data and simulation rule data to numerically simulate an interaction of physical objects, thereby creating a simulated interaction, wherein said interaction of said physical objects include a plurality of outcomes having a winning condition;

rendering a visual display of said simulated interaction using a two-dimensional representation of three-dimensional forms;

randomly determining an outcome of said interaction; and

awarding a payoff if said outcome is the winning condition.

23. (Previously Presented) The method of claim 8 wherein the determining if said game actions is the winning condition is determined prior to displaying a visual depiction of said game actions.

24. (Previously Presented) The gaming machine of claim 1, wherein said simulation rule data of said physical object remains constant over time.

25. (Previously Presented) The gaming machine of claim 1, wherein said simulation rule data of said physical object changes over time.

26. (Previously Presented) The gaming machine of claim 1, wherein said simulation rule data affects the selection of said winning condition.

27. (Previously Presented) The method of claim 8 further comprising modifying said simulation rule data of said physical object based upon said game actions.

28. (Previously Presented) The method of claim 8, wherein said simulation rule data affects the selection of said winning condition.

29. (Previously Presented) The method of claim 22, wherein said simulation rule data affects said outcome of said interaction.